

Nuclear Regulatory Commission**§ 30.70**

of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

[30 FR 8185, June 26, 1965, as amended at 35 FR 11460, July 17, 1970; 43 FR 6922, Feb. 17, 1978]

§ 30.62 Right to cause the withholding or recall of byproduct material.

The Commission may cause the withholding or recall of byproduct material from any licensee who is not equipped to observe or fails to observe such safety standards to protect health as may be established by the Commission, or who uses such materials in violation of law or regulation of the Commission, or in a manner other than as disclosed in the application therefor or approved by the Commission.

[30 FR 8185, June 26, 1965, as amended at 40 FR 8785, Mar. 3, 1975]

§ 30.63 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of—

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of—

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55072, Nov. 24, 1992]

§ 30.64 Criminal penalties.

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 30 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 30 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 30.1, 30.2, 30.4, 30.5, 30.6, 30.8, 30.11, 30.12, 30.13, 30.15, 30.16, 30.31, 30.32, 30.33, 30.37, 30.38, 30.39, 30.61, 30.62, 30.63, 30.64, 30.70, 30.71, and 30.72.

[57 FR 55072, Nov. 24, 1992]

SCHEDULES
§ 30.70 Schedule A—Exempt concentrations.

[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas concentration μCi/ml ¹	Liquid and solid concentration μCi/ ml ²
Antimony (51)	Sb 122 .....	.....	3×10 ⁻⁴
	Sb 124 .....	.....	2×10 ⁻⁴
	Sb 125 .....	.....	1×10 ⁻³
Argon (18)	A 37	1×10 ⁻³	5×10 ⁻³
	A 41	4×10 ⁻⁷	5×10 ⁻⁴
Arsenic (33)	As 73	2×10 ⁻⁴
	As 74	8×10 ⁻⁴
	As 76	2×10 ⁻⁴
	As 77	2×10 ⁻³
Barium (56)	Ba 131

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[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas concentration μCi/ml ¹	Liquid and solid concentration μCi/ ml ²
Beryllium (4)	Ba 140 .....	.....	3×10 ⁻⁴
Bismuth (83)	Be 7 .....	.....	2×10 ⁻²
Bromine (35)	Bi 206 .....	.....	4×10 ⁻⁴
Cadmium (48)	Br 82	4×10 ⁻⁷	3×10 ⁻³
	Cd 109 .....	.....	2×10 ⁻³
	Cd 115m .....	.....	3×10 ⁻⁴
	Cd 115 .....	.....	3×10 ⁻⁴
Calcium (20)	Ca 45 .....	.....	9×10 ⁻⁵
	Ca 47 .....	.....	5×10 ⁻⁴
Carbon (6)	C 14	1×10 ⁻⁶	8×10 ⁻³
Cerium (58)	Ce 141 .....	.....	9×10 ⁻⁴
	Ce 143 .....	.....	4×10 ⁻⁴
	Ce 144 .....	.....	1×10 ⁻⁴
Cesium (55)	Cs 131 .....	.....	2×10 ⁻²
	Cs 134m .....	.....	6×10 ⁻²
	Cs 134 .....	.....	9×10 ⁻⁵
Chlorine (17)	Cl 38	9×10 ⁻⁷	4×10 ⁻³
Chromium (24)	Cr 51 .....	.....	2×10 ⁻²
Cobalt (27)	Co 57 .....	.....	5×10 ⁻³
	Co 58 .....	.....	1×10 ⁻³
	Co 60 .....	.....	5×10 ⁻⁴
Copper (29)	Cu 64 .....	.....	3×10 ⁻³
Dysprosium (66)	Dy 165 .....	.....	4×10 ⁻³
	Dy 166 .....	.....	4×10 ⁻⁴
Erbium (68)	Er 169 .....	.....	9×10 ⁻⁴
	Er 171 .....	.....	1×10 ⁻³
Europium (63)	Eu 152	(T/2=9.2 Hrs).	6×10 ⁻⁴
	Eu 155 .....	.....	2×10 ⁻³
Fluorine (9)	F 18	2×10 ⁻⁶	8×10 ⁻³
Gadolinium (64)	Gd 153 .....	.....	2×10 ⁻³
	Gd 159 .....	.....	8×10 ⁻⁴
Gallium (31)	Ga 72 .....	.....	4×10 ⁻⁴
Germanium (32)	Ge 71 .....	.....	2×10 ⁻²
Gold (79)	Au 196 .....	.....	2×10 ⁻³
	Au 198 .....	.....	5×10 ⁻⁴
	Au 199 .....	.....	2×10 ⁻³
Hafnium (72)	Hf 181 .....	.....	7×10 ⁻⁴
Hydrogen (1)	H 3	5×10 ⁻⁶	3×10 ⁻²
Indium (49)	In 113m .....	.....	1×10 ⁻²
	In 114m .....	.....	2×10 ⁻⁴
Iodine (53)	I 126	3×10 ⁻⁹	2×10 ⁻⁵
	I 131	3×10 ⁻⁹	2×10 ⁻⁵
	I 132	8×10 ⁻⁸	6×10 ⁻⁴
	I 133	1×10 ⁻⁸	7×10 ⁻⁵
	I 134	2×10 ⁻⁷	1×10 ⁻³
Iridium (77)	Ir 190 .....	.....	2×10 ⁻³
	Ir 192 .....	.....	4×10 ⁻⁴
	Ir 194 .....	.....	3×10 ⁻⁴
Iron (26)	Fe 55 .....	.....	8×10 ⁻³
	Fe 59 .....	.....	6×10 ⁻⁴
Krypton (36)	Kr 85m	1×10 ⁻⁶ .	2×10 ⁻⁴
	Kr 85	3×10 ⁻⁶ .	4×10 ⁻³
Lanthanum (57)	La 140 .....	.....	1×10 ⁻³
Lead (82)	Pb 203 .....	.....	3×10 ⁻⁴
Lutetium (71)	Lu 177 .....	.....	3×10 ⁻⁴
Manganese (25)	Mn 52 .....	.....	1×10 ⁻³
	Mn 54 .....	.....	1×10 ⁻³
	Mn 56 .....	.....	1×10 ⁻³
Mercury (80)	Hg 197m .....	.....	2×10 ⁻³
	Hg 197 .....	.....	3×10 ⁻³
	Hg 203 .....	.....	2×10 ⁻⁴
Molybdenum (42)	Mo 99 .....	.....	2×10 ⁻³
Neodymium (60)	Nd 147 .....	.....	6×10 ⁻⁴
	Nd 149 .....	.....	3×10 ⁻³
Nickel (28)	Ni 65	1×10 ⁻³
Niobium (Columbium) (41)	Nb 95	1×10 ⁻³
	Nb 97	9×10 ⁻³
Osmium (76)	Os 185	7×10 ⁻⁴

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[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas concentration μCi/ml ¹	Liquid and solid concentration μCi/ ml ²
Palladium (46)	Os 191m .....	.....	3×10 ⁻²
	Os 191 .....	.....	2×10 ⁻³
	Os 193 .....	.....	6×10 ⁻⁴
	Pd 103 .....	.....	3×10 ⁻³
	Pd 109 .....	.....	9×10 ⁻⁴
	P 32 .....	.....	2×10 ⁻⁴
Phosphorus (15)	Pt 191 .....	.....	1×10 ⁻³
Platinum (78)	Pt 193m .....	.....	1×10 ⁻²
	Pt 197m .....	.....	1×10 ⁻²
	Pt 197 .....	.....	1×10 ⁻³
Potassium (19)	K 42 .....	.....	3×10 ⁻³
Praseodymium (59)	Pr 142 .....	.....	3×10 ⁻⁴
	Pr 143 .....	.....	5×10 ⁻⁴
Promethium (61)	Pm 147 .....	.....	2×10 ⁻³
	Pm 149 .....	.....	4×10 ⁻⁴
Rhenium (75)	Re 183 .....	.....	6×10 ⁻³
	Re 186 .....	.....	9×10 ⁻⁴
	Re 188 .....	.....	6×10 ⁻⁴
Rhodium (45)	Rh 103m .....	.....	1×10 ⁻¹
	Rh 105 .....	.....	1×10 ⁻³
Rubidium (37)	Rb 86 .....	.....	7×10 ⁻⁴
Ruthenium (44)	Ru 97 .....	.....	4×10 ⁻⁴
	Ru 103 .....	.....	8×10 ⁻⁴
	Ru 105 .....	.....	1×10 ⁻³
	Ru 106 .....	.....	1×10 ⁻⁴
	Sm 153 .....	.....	8×10 ⁻⁴
Samarium (62)	Sc 46 .....	.....	4×10 ⁻⁴
Scandium (21)	Sc 47 .....	.....	9×10 ⁻⁴
	Sc 48 .....	.....	3×10 ⁻⁴
Selenium (34)	Se 75 .....	.....	3×10 ⁻³
Silicon (14)	Si 31 .....	.....	9×10 ⁻³
Silver (47)	Ag 105 .....	.....	1×10 ⁻³
	Ag 109m .....	.....	3×10 ⁻⁴
	Ag 111 .....	.....	4×10 ⁻⁴
Sodium (11)	Na 24 .....	.....	2×10 ⁻³
Strontrium (38)	Sr 85 .....	.....	1×10 ⁻⁴
	Sr 89 .....	.....	1×10 ⁻⁴
	Sr 91 .....	.....	7×10 ⁻⁴
	Sr 92 .....	.....	7×10 ⁻⁴
Sulfur (16)	S 35	9×10 ⁻⁸	6×10 ⁻⁴
Tantalum (73)	Ta 182 .....	.....	4×10 ⁻⁴
Technetium (43)	Tc 96m .....	.....	1×10 ⁻¹
	Tc 96 .....	.....	1×10 ⁻³
	Te 125m .....	.....	2×10 ⁻³
Tellurium (52)	Te 127m .....	.....	6×10 ⁻⁴
	Te 127 .....	.....	3×10 ⁻³
	Te 129m .....	.....	3×10 ⁻⁴
	Te 131m .....	.....	6×10 ⁻⁴
	Te 132 .....	.....	3×10 ⁻⁴
Terbium (65)	Tb 160 .....	.....	4×10 ⁻⁴
Thallium (81)	Tl 200 .....	.....	4×10 ⁻³
	Tl 201 .....	.....	3×10 ⁻³
	Tl 202 .....	.....	1×10 ⁻³
	Tl 204 .....	.....	1×10 ⁻³
Thulium (69)	Tm 170 .....	.....	5×10 ⁻⁴
Tin (50)	Tm 171 .....	.....	5×10 ⁻³
	Sn 113 .....	.....	9×10 ⁻⁴
	Sn 125 .....	.....	2×10 ⁻⁴
Tungsten (Wolfram) (74)	W 181 .....	.....	4×10 ⁻³
	W 187 .....	.....	7×10 ⁻⁴
Vanadium (23)	V 48 .....	.....	3×10 ⁻⁴
Xenon (54)	Xe 131m	4×10 ⁻⁶	
	Xe 133	3×10 ⁻⁶	
	Xe 135	1×10 ⁻⁶	
Ytterbium (70)	Yb 175	1×10 ⁻³
Yttrium (39)	Y 90	2×10 ⁻⁴
	Y 91m	3×10 ⁻²
	Y 91	3×10 ⁻⁴
	Y 92	6×10 ⁻⁴

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[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas concentration μCi/ml ¹	Liquid and solid concentration μCi/ ml ²
Zinc (30)	Y 93 .....	.....	3×10 ⁻⁴
	Zn 65 .....	.....	1×10 ⁻³
	Zn 69m .....	.....	7×10 ⁻⁴
	Zn 69 .....	.....	2×10 ⁻²
Zirconium (40)	Zr 95 .....	.....	6×10 ⁻⁴
	Zr 97 .....	.....	2×10 ⁻⁴
Beta and/or gamma emitting byproduct material not listed above with half-life less than 3 years.		1×10 ⁻¹⁰	1×10 ⁻⁶

Footnotes to Schedule A:

¹ Values are given only for those materials normally used as gases.

² μCi/gm for solids.

NOTE 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule A, the activity stated is that of the parent isotope and takes into account the daughters.

NOTE 2: For purposes of § 30.14 where there is involved a combination of isotopes, the limit for the combination should be derived as follows:

Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule A for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

Example:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} < 1$$

[30 FR 8185, June 26, 1965, as amended at 35 FR 3982, Mar. 3, 1970; 38 FR 29314, Oct. 24, 1973;
59 FR 5520, Feb. 7, 1994]

§ 30.71 Schedule B.

Byproduct material	Microcuries	Byproduct material	Microcuries
Dysprosium 165 (Dy 165)	10	Dysprosium 166 (Dy 166)	100
Erbium 169 (Er 169)	100	Erbium 171 (Er 171)	100
Europium 152 9.2 h (Eu 152 9.2 h)	100	Europium 152 13 yr (Eu 152 13 yr)	1
Europium 154 (Eu 154)	10	Europium 154 (Eu 154)	1
Europium 155 (Eu 155)	10	Fluorine 18 (F 18)	1,000
Gadolinium 153 (Gd 153)	10	Gadolinium 159 (Gd 159)	100
Gallium 67 (Ga 67)	10	Gallium 72 (Ga 72)	10
Germanium 68 (Ge 68)	10	Germanium 71 (Ge 71)	100
Germanium 71 (Ge 71)	10	Gold 195 (Au 195)	10
Gold 198 (Au 198)	100	Gold 198 (Au 198)	100
Gold 199 (Au 199)	10	Gold 199 (Au 199)	100
Hafnium 181 (Hf 181)	10	Holmium 166 (Ho 166)	100
Hydrogen 3 (H 3)	100	Iodine 111 (In 111)	1,000
Iodine 111 (In 111)	100	Iodine 113m (In 113m)	100
Iodine 114m (In 114m)	1	Iodine 114m (In 114m)	10
Iodine 115m (In 115m)	1,000	Iodine 115m (In 115m)	100
Iodine 115 (In 115)	100	Iodine 115 (In 115)	10
Iodine 123 (I 123)	1	Iodine 123 (I 123)	100
Iodine 125 (I 125)	10	Iodine 125 (I 125)	1
Iodine 126 (I 126)	10	Iodine 126 (I 126)	1
Iodine 129 (I 129)	10	Iodine 129 (I 129)	0.1
Iodine 131 (I 131)	10	Iodine 131 (I 131)	1
Iodine 132 (I 132)	10	Iodine 132 (I 132)	10
Iodine 133 (I 133)	1,000	Iodine 133 (I 133)	1
Iodine 134 (I 134)	100	Iodine 134 (I 134)	10
Iodine 135 (I 135)	10	Iodine 135 (I 135)	10
Iridium 192 (Ir 192)	10	Iridium 192 (Ir 192)	10
Iridium 194 (Ir 194)	1	Iridium 194 (Ir 194)	100
Iron 52 (Fe 52)	100	Iron 52 (Fe 52)	10